



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/435,113 11/05/99 MCDANIEL

IM22/1016
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EXAMINER

APR 01 1999 PAPER NUMBER

1755
DATE MAILED:

10/16/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/435,113

Applicant(s)

McDaniel et al.

Examiner

J. Pasterczyk

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 2, 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-60 is/are pending in the application.
- 4a) Of the above, claim(s) 48-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 30-60 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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1. This Office action is in response to the amendment filed 8/2/01 and refers to the first Office action mailed 1/31/01.

2. Newly submitted claims 48-60 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the above claims are drawn to an olefin polymerization process compared to the catalyst claims originally elected and examined. Since the reason for making the original restriction requirement would apply equally to the newly-presented claims, the restriction requirement is maintained.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 48-60 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

3. Regarding the withdrawn claims, the examiner notes that claim 48 depends from now-cancelled claim 1, and should apparently depend from claim 30.

4. Claims 30-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 30 and 47, the pore volume is recited in units of g/cc, which is apparently in error. In the last line of component a) of each of these claims, it is not clear if the chromium is in the divalent state before or after the carbon monoxide contacting step.

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In claims 35 and 37, the ratios are given as units of atoms of metal to atoms of metal, implying that the metal is in the elemental oxidation state; this appears to be in error.

In claim 39, in the last two lines "and mixtures thereof" appears to broaden the scope of the claims since in the b) component of claim 30, part iii) refers to mixtures of parts i) and ii).

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 30-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Debras et al., USP 6,245,869 B1 (hereafter referred to as Debras) (note filing date) in view of either of Konrad or Witt as cited in the previous Office action.

Debras discloses a chromium catalyst supported on titanated silica in combination with aluminum or zinc alkyls (abstract), the porosity and surface area of the support material reading on that of the present invention (col. 2, l. 60-63). The catalyst has been calcined and activated with carbon monoxide (col. 3, l. 7-11, l. 27-41).

Debras lacks disclosure of the particular combination of cocatalysts of the present invention.

However, Konrad teaches that with chromium catalysts it is conventional to use lithium alkyl cocatalysts (col. 2, l. 32) as well as aluminum alkyl alkoxide cocatalysts (col. 7, l. 26). Witt teaches that it is conventional to use boron alkyls and aluminum alkyl alkoxides with chromium catalysts (col. 2, l. 30 to col. 3, l. 25).

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It would have been obvious to one of ordinary skill in the art to apply the teachings of either of Witt or Konrad to the disclosure of Debras with a reasonable expectation of obtaining a highly-useful catalyst with the expected benefit of the polymer having a higher shear response and known molecular weight distribution.

7. Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Debras in view of Konrad or Witt as applied to claims 30-45 above, and further in view of Benham as cited in the previous Office action.

The disclosures of Debras, Konrad and Witt have been discussed above.

These three reference lack disclosure of combining a chromium catalyst with a titanium, zirconium, or vanadium aluminum Ziegler-Natta catalyst.

However, Benham teaches that it is conventional to make such a combination (col. 2, l. 11-40).

It would have been obvious to one of ordinary skill in the art to apply the teaching of Benham to the disclosures of Debras, Witt and Konrad with a reasonable expectation of obtaining a highly-useful olefin polymerization catalyst with the expected benefit of the catalyst affording a broad molecular weight polymer.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is (703) 308-3497. The examiner can normally be reached on M-F from 8:30 to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached on (703) 308-3823. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5433.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



J. Pasterczyk

10/11/01



Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700